

**FACTORS THAT INFLUENCE A HEALTHY RELATIONSHIP BETWEEN
RESEARCH ADMINISTRATORS AND INVESTIGATORS IN THE AWARD
MANAGEMENT PROCESS**

by
Celia Pamela Corona Villalobos, MD

A thesis submitted to Johns Hopkins University in conformity with the requirements for
the degree of Master of Science in Research Administration

Baltimore, Maryland
May 2020

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Abstract

Research administrators work in a variety of organizations, ranging from universities, hospitals, and government research agencies to for-profit corporations and nonprofit institutions. Research administrators actively serve as a principal investigator's consultant, resource, and authority regarding federal and institutional guidelines and policies related to sponsored programs. They not only carry the responsibility of project award management but also provide guidance and support to investigators. Research administrators and principal investigators interact with each other to coordinate efforts as they work toward a common goal of sponsored project management. While the principal investigator drives the scientific investigation, the research administrator serves as the science project counterpart by managing all other research activities of the grant lifecycle. Therefore, it is critical for research administrators to develop healthy work relationships with investigators during the award management process to avoid losing funding at any point of the project and to create a virtuous circle where communication and collaboration nurture engagement and contribute to the success of the award.

This was a single case control research project based on the administration of a one-time survey. The conceptual framework of the survey was based on the work relationship assessment from a survey published by the American Academy of Family Physicians (AAFP). After HIRB approval, the survey invitation was distributed. After HIRB

ABSTRACT

approval, the survey invitation was distributed. Fifty-seven respondents from the National Council of University Research Administrators' (NCURA's) Collaborate initiative participate in this survey. Over 50% of research administrators agreed on respectful work relationships, and 40% of participants agreed on successful practices, tolerating differences in opinions, awareness of individual contributions, and new ideas. However, around 60% of respondents recognized a degree of failure to communicate adequately and properly, a lack of interactions beyond task-related relationships, and the absence of confidence in seeking input from one another.

Primary Reader and Advisor: John M. Carfora

Acknowledgements

This thesis project concludes a two-year journey into the science of research administration. This Master's of Science program was a great opportunity to advance my knowledge in the management of sponsored research programs and how organized research is led. My full gratitude goes to each Professor that has helped me throughout this program. They always provided great expertise and enhance every topic with special input. Special thanks to Professor Kim Moreland and Professor Jeffrey Kantor for providing me with constructive feedback and for helping me understand topics outside of my expertise. To my mentor, Professor Carfora, for guiding me in this closing journey despite unprecedented times. It was a great privilege to share this experience with all my classmates, as they enhanced this program with their experiences and input.

Dedication

This thesis is dedicated to my husband Manuel for his unconditional love and support, for always being there in “the good, the bad, and the ugly moments”. Words cannot describe the sense of gratitude I have for having you in my life. You have always encouraged me to pursue my dreams and never hold back. To my son Daniel for constantly bringing me a smile to my face even in the most challenging moments, thank you for being such a wonderful son. To my parents, thank you Mom and Dad for always being a source of inspiration. Lastly to my brothers, thank you for always being there.

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Chapter 1

Introduction

Background

The field of research administration is complex and demanding. It is a profession that encompasses a wide variety of roles and responsibilities related to the lifecycles of research grant. Research administrator tasks are diverse, and they can include, among other activities, evaluating whether a grant aligns with the institution's mission, writing a proposal, developing budgets for the grant proposal, serving as a point of contact with federal grant managers, ensuring compliance with requirements related to human subjects, animal welfare, and biohazards, implementing and reporting on federal grants, working with federal grant managers as they conduct site visits and reviews, collaborating and coordinating internal and external audits, completing financial and programmatic progress reports and grant closures, and facilitating training initiatives (SRA 2019; JHM PDCO 2020).

Effective grant management is crucial for both investigators and also for research administrators. Maladministration of a grant has severe consequences, such as loss of funding support and ineligibility for receiving future funds. At the same time, research administrators and principal investigators face significant administrative workload for federally funded research as described in the 2014 National Science Board report entitled *Reducing investigators' administrative workload for federally funded research* (National Science Board 2014). Consequently, it is imperative for research administrators to develop a strong and healthy relationship with principal investigators to efficiently balance working relationships.

Several publications have been developed to explain the importance of working relationships between faculty members and research administrators. Wedeking and Philbin (2018), for example, described the role of the project management office in a European research consortium context. In their article, the authors clearly indicated that faculty members must work alongside research administrators, maintaining communication channels, and a two-way flow of information to successfully navigate the world of research grant management. They also acknowledge that this relationship starts from the initial stage and extends to the eventual delivery of the project (Wedekind and Philbin 2018). The authors also discussed how this process can run smoothly with effective one-on-one relationships between research administrators and faculty members. However, in the case of more complex projects, such as a consortium with several partners it could lead to a number of challenges. For example, insufficient leadership, the need for administration services to rapidly undertake financial and

contract related activities and proposal deadlines, and inadequate planning, which can lead to difficulties in delivery of the initiative (Philbin and Mallo 2016).

Problem Statement

The role of research administrators is complex and encompasses multiple tasks such as planning and developing a research project, securing and allocating research resources, compliance monitoring and executing controls and accounting activities. In other words, research administrators facilitate the research endeavors of a scientist. According to Ross (1990), research administrator's focus is on policies and procedures whereas scientist are stereotyped as thinkers working long hours to bring new discoveries (Ross 1990). Research administrators are team players who strive for organization efficiency following guidelines and regulations, while scientist are more focused on individual initiatives and the success of the research study. In consequence, these differences in style can result in conflict between research faculty and research administrators (Ross 1990). The relationship between research administrators and researchers is crucial for the success of the award. A recommendation determining the success of research endeavors provided by Ross was to promote free and complete communication. *Administrations and scientist cannot work in a vacuum and expect complete and unquestioned acceptance and understanding of each other's action or needs* (Ross 1990, 22).

Communication is vital in creating and maintaining healthy work relationships as it can affect how to solve problems, and the level of trust in work relationships. One of the most critical concept of effective communication is trust (Grover 2005). Mutuality or

interrelatedness is another important factor in work relationships. Being aware of others functions, feeling connections and sharing problem solving unfolds interactions (Rosenkoetter et al. 1993).

Martinelli (2018) mentions that diversity in work relationships is not attributed to race, gender, and religion but to differences in work style, generational differences and personalities (Martinelli 2018). Mutual respect in the workplace will help to improve communication, reduce stress and increase productivity and understanding (Martinelli 2018). Trust and respect represent distinct interpersonal outcomes.

Objective

The objective of this thesis was to collect data on the current perspectives of work relationships from members of the National Council of University Research Administrators (NCURA) to determine the key factors of successful relationships between research administrators and principal investigators. This survey gathered present data from research administrators who are NCURA members. NCURA members include a variety of backgrounds such as universities, colleges, and hospitals that will bring different perspectives of successful working relationships. The data was used to explore a number of elements that best describe the characteristics of work relationships. These characteristics provide important insight and a better understanding of how to foster healthy work relationships among research administrators and investigators.

Research Question

The aim of this research study was to determine which characteristics constitute more successful work relationships and consequently improve the grant award management process. There are several factors that contribute in work relationships, though this study focuses of seven characteristics (trust, diversity, mindfulness, interrelatedness, respect, varied interaction, and effective communication) of successful work relationships to better understand how research administrators perceived their current work relationship environment. Knowledge gained from this study can be used as a guide by providing constructive feedback to research administrators and principal investigators as a means of promoting healthy work environments.

Chapter 2

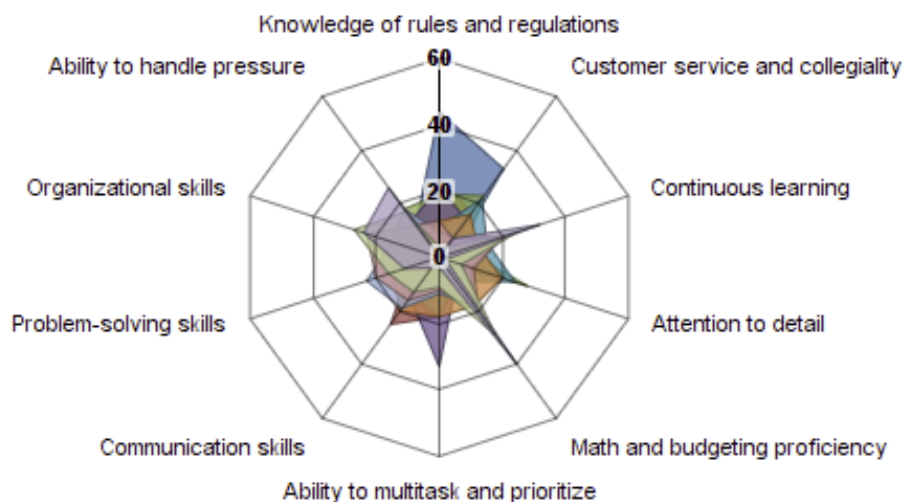
Literature Review

The Primary Activities Performed by a Research Administrator

The Society of Research Administrators (SRA) International (2019) and the Johns Hopkins Medicine Professional Development and Career Office (2020) describe a research administrator as skilled professionals who raise funds, make funding decisions, ensure compliance with standards and regulations, coordinate projects, investigate ethical issues, and have knowledge in technology transfer and intellectual property. They also provide attention to detail, handle pressure, as well as being quick problem-solvers, effective communicators, collegial, and consistent in their work (SRA 2019; JHM PDCO 2020).

The 2016 survey published by the Society of Research Administrators (SRA) International is particularly relevant to this study, (Davis-Hamilton and Marina 2016). A total of 152 research administrators responded to the survey, and 55% of respondents had more than 12 years of experience. The authors highlight that 91% of survey respondents reported enjoying their jobs and 71% of respondents planned to remain in

the profession for the next five years. Furthermore, it was intriguing that despite participants describing the profession as constantly changing (86%), complex (81%), demanding and challenging (81%), and stressful (65%), research administrators reported that their field was worthwhile as a career due to its complex nature. Most respondents considered knowledge of rules and regulations as the most important research administrator skill. In addition, the second highest rated qualities were customer service and collegiality, followed by attention to detail, problem-solving, and the ability to handle pressure and multitask. No respondent considered math and budgeting proficiency to be the most importance skill of a research administrators (Figure 1). The results obtained from this survey were particularly relevant because research administrators perceived knowledge and collegiality as the most prized qualities in their profession.



2016 SRA International Survey. What makes a Research administrator?

<https://www.srainternational.org/blogs/martha-jack/2018/04/27/what-makes-a-research-administrator-pulse>

Figure 1. Important Qualities of a Research Administrator.

Importance of Healthy Working Relationships

Research administrators work closely with the principal investigator throughout the grant life cycle. Research administrators must develop healthy working relationships with faculty to effectively manage all aspects of grant administration.

While it is well known that working relationships can influence how grants are managed, how do we achieve effective teamwork and balance customer service interactions? This question was addressed in an NCURA Magazine article by Luogo and Moody entitled *Partnerships: Where People Come First and the Business of Research Compliance Follows*. They described five key competencies to develop strong working relationships (Luongo and Moody 2015). The authors focused on building strong working relationships, which was first key competency described in the article. The primary reason for establishing strong working relationships is to enhance customer service, facilitate enforcement of policies and procedures, ease difficult conversations by ensuring the opinions of others are respected, and help to complete tasks. The second key competency covered in the article was trust. Trust was described as the foundation of a relationship between the research administrator and the sponsor. Distrust can compromise sponsor funding for the institution. A similar approach applies to the research administrator and the principal investigator. If the principal investigator or the collaborators do not trust the expertise and commitment of research administrators, they will not rely on their advice and will not invest in the relationship. The third key competency was collaboration and teamwork. The authors eloquently stated that successful teamwork and collaboration result in better understanding as well as a higher compliance rate and adherence to new and updated policies and

procedures. Their statement about leadership and collaborations was a particularly important point of their article. *“A team leader must be strong and have the ability to steer a team in the right direction while producing timely and effective results”* (Luongo and Moody 2015). When people who trust and support each other, stronger relationships are built. The fourth key competency mentioned in the article was effective communication. Communication within the research administration field is crucial. Research administrators must communicate with principal investigators, department administrators, the office of sponsored programs, and external partners and sponsors. The last key competency was customer service. A researcher administrator should be a great listener to develop and preserve positive customer relationships.

The School District of Philadelphia developed a guide that focused on the core competencies in grants management (School District of Philadelphia 2014). This guide was based on interviews of grant program managers at various school and central offices who reportedly demonstrated best practices on a consistent basis. The document described the top eight effective grants management core competencies detailing a series of key concepts, tools and resources, best practices, and support examples. These competencies included using management systems, managing risk, understanding federal and non-federal requirements, translating a proposal into a program plan and using it, managing and administering subgrants, managing budget and finances, keeping records and documentation, and the continuing review. However, under the managing budget and finances section, the document clearly stated,

Many roles and responsibilities by necessity are jointly managed and executed. A symbiotic relationship exists between the Grant Program Manager (GPM) and

the Grant Budget Analyst (GBA) and the effectiveness of that relationship depends on an understanding of the roles and responsibilities of each, clear communication, and a professional working relationship. If that relationship is dysfunctional in any way, the situation should be made known immediately to appropriate management personnel so that the problem can be remedied (21).

Similarly, in the award management process there are many roles and responsibilities that must be carried out jointly by the research administrator and the principal investigator. To avoid a work relationship breakdown, research administrators and principal investigators should promote understanding, mutual appreciation, respect, trust, and effective communication to continue to work in a challenging environment that promotes functional work relationships.

Seppälä and Cameron (2015) listed six essential characteristics to create a positive and healthy work culture in the *Harvard Business Review* (Seppälä and Cameron 2015). These characteristics included caring for and maintaining responsibility, providing support, avoiding blame and forgiving mistakes, inspiring one another at work, emphasizing the meaningfulness of the work, and treating one another with respect, gratitude, trust, and integrity (Seppälä & Cameron 2015). The authors concluded that these characteristics foster a more successful workplace to improve relationships and consequently buffer against negative experiences, such as stress and challenges, while bolstering their health.

The AAFP reported that clinical and financial success can sometimes depend on working relationships within the practice (Talia, et al. 2006). The authors emphasized that one of the key contributors to a practice's success is the presence of functional

working relationships. Similar to family practices, the award management environment is influenced by the outcomes of these relationships. Seven interdependent characteristics of working relationships were described in successful practices and include: trust, diversity, mindfulness, interrelatedness, respect, varied interaction, and effective communication. These publications highlighted that successful strong and collegial working relationships are founded on trust, respect, and effective communications.

How to Build Positive and Effective Working Relationships

Nowadays, there are global platforms with experts and contributors who share their valuable knowledge and experience to continuously discover and share better ways to live a meaningful and fulfilling life in a stressful job. Ankit Garg, a serial entrepreneur, published an article on ten ways to build positive and effective work relationships in Lifehack.org (Garg 2020). The author highlighted that even the slightest discord between two employees may negatively affect the entire team, which can have a significant negative effect on organizational success. Garg proposed ten ways to build positive and effective working relationships to help employees work together as a team. These methods of building positive work relationships can facilitate research administrators' ability to successfully achieve and create a healthy interactions with principal investigators.

Respect your peer's time. In the research administration profession, it is essential to plan how work must be completed on time and understand how delays in deadlines can impact grant management. Hence, it is essential to respect fellow

colleagues' time and effort to ensure performance within a set period of time. Research administrators can show respect to investigators by being considerate, honest and tactful when presenting issues in the award management.

Ensure that you are cautious with social media. Although it may appear unrelated to the effectiveness of a research administrator, it can be quite important. Currently, the use of social media is not only used for networking but also as a tool to find and share information, create presence, promote knowledge, and highlight professional reputations, among other uses. It is essential to ensure social media policies at your institution are followed.

Maintain communication transparency. This is a crucial element to fostering good working relationships and building trust. Research administrators communicate with sponsors, principal investigators, institutional management, monitors, auditors, and research staff. It is important to deliver messages clearly and that ensure that they are understood in the intended manner. Garg mentioned that *“any formal channel of communication would be the appropriate way to communicate in order to keep everything on record”* (Garg 2020). As research administrators, it is not only important to effectively communicate and deliver messages, but also to document everything to minimize misunderstandings and potential disagreements.

Give constructive feedback. Giving and receiving feedback help everyone understand how well members are performing and identify what areas can be improved. Constructive feedback is beneficial at work because it shows your peers and colleagues that you care about them.

Make use of common courtesies. I was curious to know how this could impact work relationships, but Garg is precise stating “*being humble never hurt anyone, even if you do not exactly receive something in return*” (Garg 2020). A simple act of courtesy could influence the relationship between research administrators and principal investigators and encourage a more productive relationship.

Get into the habit of helping yourself. Garg indicating that it is important to make efforts to find the answer yourself before asking someone else, which is very useful. Instead of taking time from your principal investigator with questions about the grant, many answers can be found by looking on the grant application or the U.S. Code of Federal Regulations (CFR) or the sponsor’s guidelines. Prepare to gather as much information that will solve the question before contacting your PI.

Treat everyone as equals. Do not get involved in situations that would not benefit you or could affect your image. Do not use your time to talk behind people back or point out disagreements or mistakes. Research administrators should keep personal views to their selves, avoid discussing researchers’ attitudes or problems with colleagues, or talking negatively about the research project.

Acknowledge your mistakes. Being accountable is not easy but mistakes happen and acknowledging the situation could help to build trust. Do not try to hide or blame your peers particularly in this type of profession. It is better to focus on developing a solution to fix problems that are encountered and ask for help early on.

Learn to take on responsibilities. Take your work and responsibilities seriously. Garg, made a good observation, *when you work in a team, your duty is to cooperate and build a positive working relationship with your teammates*. Remember

grant management is a complex process, and you cannot put your work on hold or pass it to others. As a research administrator, you must engage constantly with work reports and deadlines.

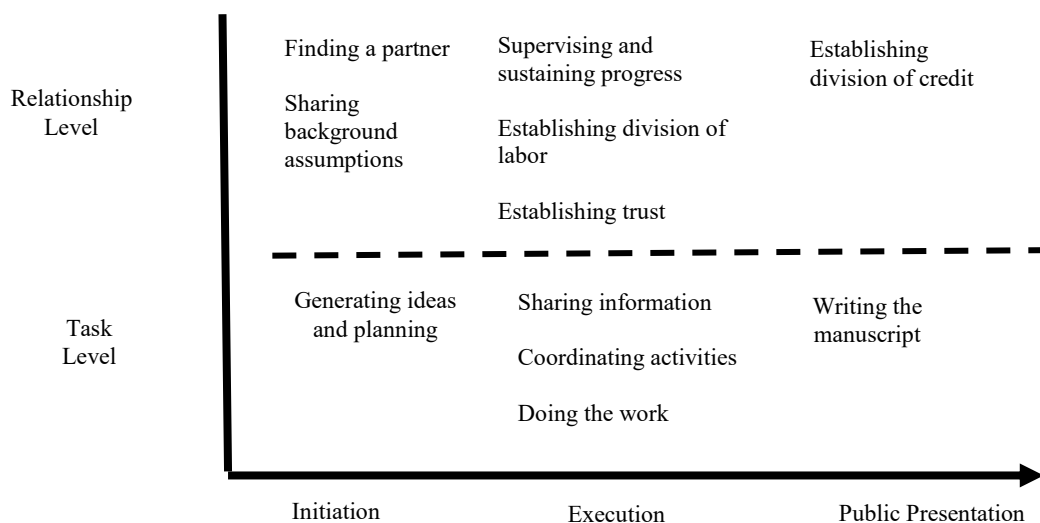
Engage in a follow-up routine. Promote and encourage follow-up routines as part of your practice. To ensure successful and effective grant management, research administrators must plan and prioritize points of service. Principal investigator should be engaged for attention, guidance, and involvement in key components of grants management.

These are good starting points to consider to achieve healthy working relationships between research administrators and principal investigators for the overall success of award management.

Challenges in Building Work Relationships

The challenge in building working relationships between research administrators and principal investigators is the heterogeneity across professions and diverse background (Bammer 2008). Huang and Brown (2019) emphasized that coercing researchers to collaborate can be counterproductive. Kraut, Galegher, and Egidio (1987) highlighted that forming a collaboration involves not only a task aspect but also a relationship aspect. The authors described a model of collaboration divided into two main levels, a task level and a relationship level (Figure 2). The task level was based on generating and planning ideas, sharing information and coordinating activities, and writing a manuscript. The relationship level included finding partners, sharing background assumptions, supervising and sustaining progress, as well as establishing a division of labor, trust, and division of credit (Kraut, Galegher, and Egidio, 1987, 34). The

task and relationship levels are similar across different disciplines. In the division of labor and final product of an award management, the collaborators, in this case, the principal investigator and the research administrator, must find a common understanding of roles and responsibilities regarding how they want to conduct the work. At the relationship level, principal investigators must do their share of the work to effectively solve problems. The principal investigator and the research administrator must build a working relationship founded on trust and commitment. The dominant conclusion of Kraut, Galegher, and Egidio (1987) was *“that the establishment and maintenance of personal relationships is the glue that holds together the pieces of a collaborative research effort”* (53).



Adapted from Kraut, Galegher, & Egidio, (1987), p. 34.

Figure 2. Model of Research Collaboration.

How Healthy Work Relationships Influence Productivity

Previous studies have shown how interpersonal relationships affect job performance (Seppala and Cameron 2015; Tran, Nguyem Dang and Ton 2018). The Society for

Human Resource Management (SHRM) reported in the 2017 Employee Job Satisfaction and Engagement Summary that 59% of U.S. employees were satisfied with their current job to some extent (SHRM 2017), and 65% of responders agree that one of the major contributors of work satisfaction was respectful treatment of all employees at all levels. The other great contributor was trust between employees and senior management. However, only 33% of employees were very satisfied with their level of trust. This survey recognized the importance of trust, open communication, and trust as the top strategies to combat current human capital challenges. Failure to integrate these components was found to represent a mark of apathy that hinders the employee-employer relationship (9). Geue (2017) highlighted the importance of positive work environments characterized by cooperation, trust, fairness, and the positive outcomes of work engagement and task performance as mediated by a positive work environment to promote employee trust, respect, and confidence (Geue 2017).

How Unhealthy Work Relationships Affect Award Management

Research administrators indicated that working in a stressful environment includes managing research grants, updating policies, and facing the administrative burden of grant management. These factors contribute to a stressful working environment. Shambrook (2011) reported a comparison of stress-related factors in the 2007 and 2010 Research Administrator Stress Perception Surveys (RASPerS) survey, which indicated that almost 90% of the respondents in the survey reported experiencing extreme levels of perceived work stress. In addition, only 14% of research administrators reported feeling appreciated for their contributions and respected at work (Shambrook 2011). As a result, many research administrators reported having difficulty maintaining work-life

balance with their families, and many routinely reported to work when they were sick. An example of how broken working relationships affect award management is the Columbia University Grant Fraud Case of 2004-2012. The Berger Montague Law Firm reported that Columbia knew it had a responsibility to properly manage employees but failed to do so (Berger Montague 2018). Work reports and work tasks were never verified for compliance with the grant's requirements. Columbia University's Finance Department generated reports for these 200 individuals, using "limited or no knowledge of which grants the individuals actually worked on", and principal investigators certified reports without verifying the information contained therein (Berger Montague 2018). The total settlement amount was \$9,020,073. This case is an example of how the lack of effective work relationships between the award management department and the principal investigators resulted in severe consequences related to grant mismanagement and work relationships.

Chapter 3

Methods

Research Project Design

This was a single case control research project based on the administration of a one-time survey. The project was approved by the Homewood Institutional Review Board (HIRB), approval HIRB00010678, and by the Chair of NCURA Region II, Katie McKeon, and the NCURA Collaborate Steering Committees. The conceptual framework for this project was based on the work relationship assessment form survey from Tallia et al. (2006) published in the American Academy of Family Physicians (Appendix 4). The survey is intended to observe seven interdependent characteristics of successful working relationships.

The study was divided into four main stages:

Study Design. This phase included brainstorming research ideas, the development of the research project, IRB approval, and timeline of events. The survey

was distributed by the following three different routes: (1) posted on the NCURA Collaborate website, (2) through the research administration listserv, and (3) posted to the NCURA Region II Facebook page. The post and email explained the purpose of this research project and its significance, inviting participants to answer an adapted version of the work relationship assessment form survey. Both the post and the email contained a link to this survey. This research used SurveyMonkey to adapt and administer the questionnaire. The survey was completely anonymous, and thus, the answers in the survey cannot be linked to the author, and the identification of the IP addresses of the computers or electronic devices were not recorded. In addition, the survey did not require the disclosure of personal or confidential information, and no monetary compensation was provided to participants.

Collection Phase. This phase began when the survey was sent to NCURA research administrators and lasted until the results of the survey were received and prompted in the dashboard. The survey was completely anonymous, and the identities of the respondents were not known. A direct survey would have been beneficial to assess research centers, productivity of the institution, academic ranks, and level of seniority of research administrators and/or years of experience. However, a direct survey can be uncomfortable for respondents, which introduces the risk of not being 100% truthful in their answers, a probability of leaving some questions unanswered, or feeling vulnerable with respect to expressing feelings and emotions. The anonymized version of the survey promotes a convenient method of gathering data with no observer subjectivity encouraging truthful answers.

Analysis Phase. In this phase, the results were cleaned and transferred to an encrypted spreadsheet to be analyzed. Data was analyzed with MedCalc Statistical Software, version 19.2.1. Descriptive statistics, such as means and standard deviations, could not explain the meaning of the survey responses. Hence, the data was assessed as the percentages of responses in each category. To assess the responses, a three-point Likert scale was used, ranging from “Always”, to “Sometimes and “Never”. This scale assessed perceptions of these categories. The Liker scale cannot assume that the difference between responses is equidistant (Sullivan and Artino 2013). For this reason, a nonparametric test was used to analyze the level of agreements between responses. The Cronbach Alfa assessed the reliability of the scale (Joseph and Rosemary 2003).

Study Outcomes

Importance of Knowledge. This survey assessed characteristics of successful work relationships between research administrators and principal investigators. The compiled responses helped to understand factors that affect these relationships. Further research may be needed to understand how to foster successful relationships to positively impact the efficiency of the award management process.

Study Population. The National Council of University Research Administrators (NCURA) provides an ideal setting to conduct the survey given the research resources available. The number of targeted participants made it possible to obtain responses from a significant sample size to analyze perceptions about working relationships and determine factors that can influence healthy working relationships. All answers were received via NCURA Collaborate groups. The survey was distributed to the following

groups: the departmental research administration community, the funding opportunities community, the electronic research administration community, and the financial research administration community. An IRB-approved email was sent to members of these groups containing a link to access the survey. A sample of the email is attached in Appendix 3. The survey was delivered in the same manner to all four communities of the NCURA Collaborate groups. The survey link directed the users to the SurveyMonkey website to begin answering the survey questions. The research questions were designed to understand perceptions about working relationship topics related to trust, diversity, mindfulness, interrelatedness, respect, varied interaction, and effective communication (Appendix 4).

Despite multiple effort to reach out to the NCURA Region II Facebook group and the health research incorporated research administration listserv (RESADM-L), the researcher was unable to establish communication, and unfortunately, the survey was not delivered. For this reason, the targeted population was limited to NCURA Collaborate communities.

Chapter 4

Results and Discussion

Data Analysis and Results

The objective of this project was to assess working relationships and identify characteristics of successful working relationships as perceived by research administrators. Statistical analysis was used to determine the perceptions of research administrators regarding working relationships. The statistical analyses were conducted using MedCalc, version 19.2.1 (Ostend and Belgium 2020) for Windows. To investigate the research questions, this researcher used nonparametric Spearman correlation coefficient, and Cronbach's alfa reliability test. After evaluating the perceptions of research administrators regarding work relationships, this author clustered the responses to examine the relationship among specific characteristics of positive work relationship.

Due to changes in the research study plan and the submission of an IRB application amendment, this period was delayed, and the survey invitation was mailed

out in April 4, 2020. The number of targeted responses by the researcher was not reached. Currently, the world is leaving a crisis due to the novel coronavirus. Recently, American lives have been changing in dramatic ways, and many institutions and research administrators are reshaping their research practices. The novel coronavirus has kept the world contained in their homes, public life has vanished, and changes have affected our lives and our working conditions. Nowadays, research administrators are coping with the stress of working from home, sharing homeschooling duties, keeping their current jobs, providing for their families, dealing with financial issues, parenting, and social distancing ,to mention a few. This crisis began before the researcher was able to submit the invitation for the survey. Given these unprecedented times, the researcher contemplated the possibility of receiving less responses to the survey invitation.

In total, 57 research administrators members of the NCURA Collaborate's supporting research groups participated in this survey. Responses were receive from April 5 to April 13, 2020. Of the 57 respondents, only two respondents neglected to fully answer the survey, providing a total of 966 answers. The questions omitted were about trust, mindfulness, and effective communication characteristics. Table 1 highlights the frequency distribution indicating the variety of responses in percentages covering the spectrum from "Always" to "Sometimes" for the most part. The original data collection period was scheduled during the end of March and early April 2020.

To assess the responses, a three-point Likert scale ranging from "Always" to "Sometimes and "Never" was used. This scale assessed perceptions of these categories. The Likert scale cannot assume that the difference between responses is

equidistant (Sullivan and Artino 2013). For this reason, a Spearman nonparametric test was used to analyze the level of agreement between responses. The Spearman correlation between two variables is high (correlation of +1) when observations have a similar rank between two variables and low (correlation of -1) when observation have a dissimilar rank. Table 2 indicates the Spearman rank correlation coefficient analysis.

Table 1. Descriptive Analysis of Successful Working Relationships

Variable – Significance of Importance	% Always	% Sometimes	% Never
Seek input from others	26.3	68.4	5.3
Allow others to complete their work without unnecessary oversight	34.0	62.5	3.6
Feel comfortable discussing success and failures	38.6	61.4	0.0
Include people who have different backgrounds or perspectives	43.9	54.4	1.8
Encourage those who think differently about important issues to share their opinions	40.4	56.1	3.5
Open to new ideas	31.5	68.4	0.0
Talk free about what is and is not working in the award management process	49.1	49.1	1.8
Adjust routines in response to current situations; not just running on autopilot	38.6	52.6	8.8
Being attentive to current tasks as well as larger goals	52.6	45.6	1.8
Being aware of individual roles and how they affect other functions and people in the field	42.1	49.1	8.7
Being considerate, honest and tactful	63.1	36.8	0.0
Valuing others' opinion	43.9	56.1	0.0
Understanding the importance of both social and task-related relationships	35.1	64.9	0.0
Encouraging people to pursue activities outside of work	43.9	49.1	7.0
Understanding when certain methods of communication are more appropriate and timely than others	33.3	64.9	1.8
Using "rich communication" (e.g. face-to-face meetings) for more sensitive matters	42.8	57.1	0.0
Using "lean communication" (e.g. memos) for routine matters	24.6	70.2	5.3

Total respondents n=57, typical time spent 2 minutes 29 seconds.

Table 2. Spearman Rank Correlation Coefficient Inter-Correlations

Survey	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
Q1 Seek input from others...	1	0.866	0.735	0.694	0.756	0.838	0.614	0.779	0.609	0.738	0.514	0.674	0.783	0.727	0.831	0.693	0.964
Q2 Allow others to complete...	0.866	1	0.871	0.789	0.859	0.93	0.718	0.882	0.675	0.83	0.564	0.789	0.934	0.813	0.969	0.815	0.833
Q3 Feel comfortable discussing...	0.735	0.871	1	0.887	0.941	0.857	0.804	0.945	0.746	0.885	0.606	0.897	0.927	0.864	0.881	0.929	0.704
Q4 Include people who have...	0.694	0.789	0.887	1	0.926	0.76	0.898	0.876	0.847	0.934	0.682	0.989	0.823	0.971	0.812	0.964	0.668
Q5 Encourage those who think...	0.756	0.859	0.941	0.926	1	0.807	0.831	0.938	0.791	0.939	0.646	0.914	0.873	0.919	0.858	0.954	0.729
Q6 Open to new ideas	0.838	0.93	0.857	0.76	0.807	1	0.688	0.81	0.64	0.759	0.519	0.769	0.924	0.74	0.945	0.795	0.8
Q7 Talk free about what is and...	0.614	0.718	0.804	0.898	0.831	0.688	1	0.798	0.931	0.852	0.745	0.898	0.745	0.883	0.717	0.866	0.589
Q8 Adjust routines in response...	0.779	0.882	0.945	0.876	0.938	0.81	0.798	1	0.769	0.947	0.659	0.866	0.876	0.911	0.858	0.897	0.753
Q9 Being attentive to current...	0.609	0.675	0.746	0.847	0.791	0.64	0.931	0.769	1	0.815	0.807	0.832	0.692	0.84	0.691	0.806	0.589
Q10 Being aware of individual...	0.738	0.83	0.885	0.934	0.939	0.759	0.852	0.947	0.815	1	0.694	0.925	0.821	0.963	0.806	0.961	0.714
Q11 Being considerate, honest...	0.514	0.564	0.606	0.682	0.646	0.519	0.745	0.659	0.807	0.694	1	0.675	0.562	0.704	0.554	0.645	0.498
Q12 Valuing others' opinion	0.674	0.789	0.897	0.989	0.914	0.769	0.898	0.866	0.832	0.925	0.675	1	0.832	0.963	0.794	0.964	0.646
Q13 Understanding the importa...	0.783	0.934	0.927	0.823	0.873	0.924	0.745	0.876	0.692	0.821	0.562	0.832	1	0.801	0.947	0.861	0.749
Q14 Encouraging people to...	0.727	0.813	0.864	0.971	0.919	0.74	0.883	0.911	0.84	0.963	0.704	0.963	0.801	1	0.788	0.937	0.704
Q15 Understanding when certain...	0.831	0.969	0.881	0.812	0.858	0.945	0.717	0.858	0.691	0.806	0.554	0.794	0.947	0.788	1	0.827	0.797
Q16 Using "rich communication"...	0.693	0.815	0.929	0.964	0.954	0.795	0.866	0.897	0.806	0.961	0.645	0.964	0.861	0.937	0.827	1	0.663
Q17 Using "learn communication"...	0.964	0.833	0.704	0.668	0.729	0.8	0.589	0.753	0.589	0.714	0.498	0.646	0.749	0.704	0.797	0.663	1

Analysis of Positive Work Relationships

The data was then categorized for each successful work relationship characteristic. The survey used 3 questions to evaluate research administrators' perception of trust. The question was based on whether research administrators feel comfortable seeking input and their openness in the discussion of failure or success. Two questions were based on diversity, which was assessed with respect to how difference in opinion was or was not encouraged. Three questions were related to mindfulness. A mindful practice was generally described as being open to new ideas, talking freely about work practices, and adjusting routines in response to current situations. Two questions were asked to evaluate interrelatedness characteristics, including whether research administrators were attentive to current tasks as well as larger goals, and whether they were aware of individual roles and responsibilities. Two questions were related to respect, being considerate, honest, tactful, and valuing the opinions of others. Two questions were related to varied interaction, assessing the importance of both social and task-related relationships, and how activities outside of work were perceived. The last questions were related to effective communication characteristics and the practices of appropriateness and timelines of methods of communications. Table 3 shows the number of answered questions based on the seven characteristics of successful work relationships.

Over 50% of respondents perceived that there was a respectful interaction in their work relationships, while 47% percent of respondents agreed on the understanding of how their work affects one another. However, 47% of individuals misperceive how individual roles affect others functions. A total of 55% of respondents thought there was

some degree of diversity in the work setting. Only 40% of respondents perceived a mindfulness relationship, while 57% of research administrators did not feel totally confident about sharing what was and was not working. The same percentage of respondents (47%) expressed sporadic importance of social and task-related relationships, and only 33% of participants perceived rich channels of communication and trustworthy relationships (Figure 3).

Table 3. Number of Responses to the Seven Characteristics of Successful Work Relationships

Characteristic	Always	Sometimes	Never	Total
Varied Interaction	45	65	4	114
Effective Communication	57	109	4	170
Respect	61	53	0	114
Interrelatedness	54	54	6	114
Diversity	48	63	3	114
Mindfulness	68	97	5	170
Trust	56	109	5	170

Total respondents n=57.

Spearman coefficient correlation was used to establish the relationship between the characteristics of work relationships. All variables showed strong to very strong correlations (Table 4). The highest correlations were found between diversity and interrelatedness ($r=0.95$, $p<0.0001$) and effective communication and varied interaction ($r=0.95$, $p<0.0001$). The lowest Spearman correlation coefficient was found between respect and mindfulness ($r=0.634$, $p<0.001$) and trust and respect ($r=0.600$, $p<0.001$).

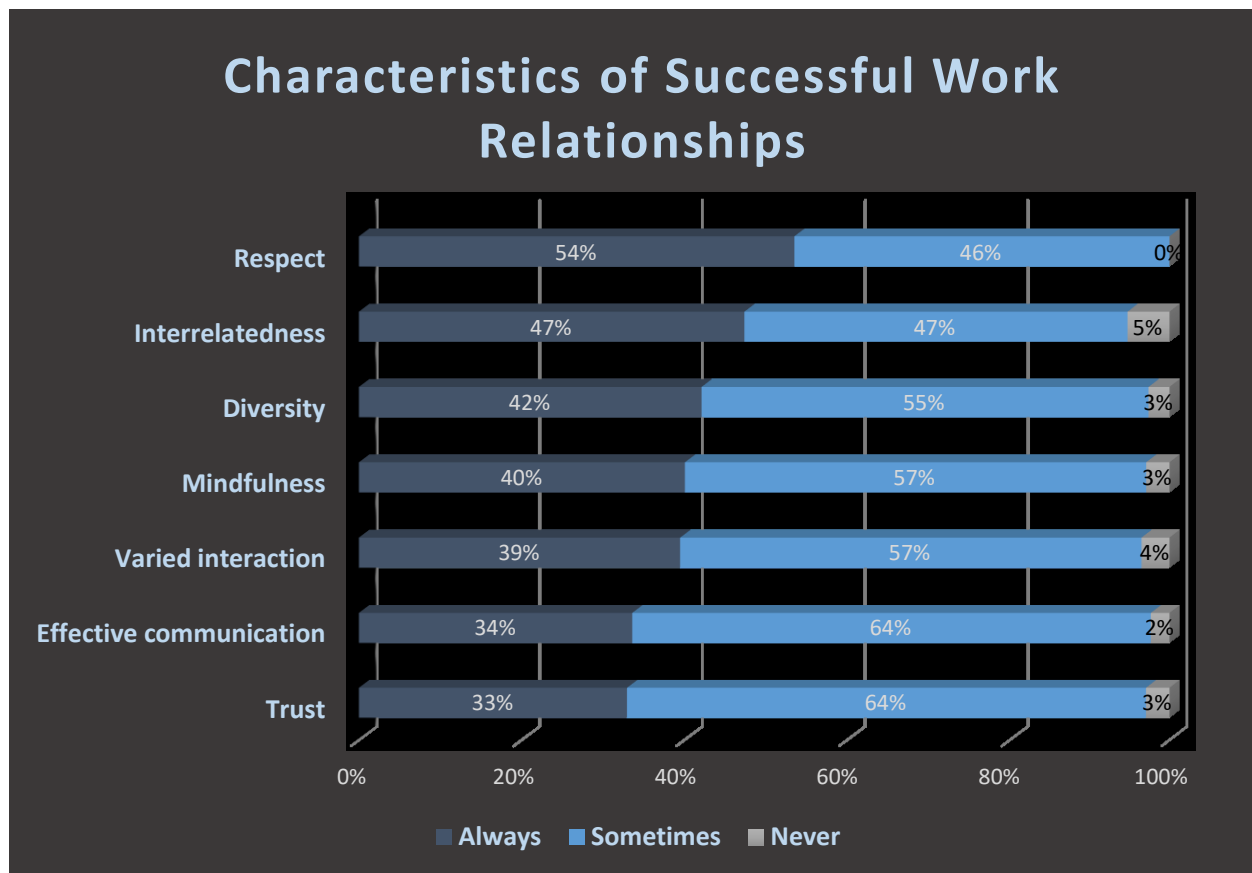


Figure 3. Descriptive Analysis of Characteristics of Successful Working Relationships

Table 4. Spearman Rank Correlation Coefficient Inter-Correlations – Characteristics of Work Relationships

Variable	Respect	Interrelatedness	Diversity	Mindfulness	Varied Interaction	Effective Communication	Trust
Respect	1	0.875	0.794	0.634	0.754	0.704	0.600
Interrelatedness	0.875	1	0.895	0.692	0.828	0.771	0.666
Diversity	0.794	0.895	1	0.755	0.869	0.832	0.727
Mindfulness	0.634	0.692	0.755	1	0.873	0.813	0.770
Varied Interaction	0.754	0.828	0.869	0.873	1	0.895	0.757
Effective Communication	0.704	0.771	0.832	0.813	0.895	1	0.758
Trust	0.600	0.666	0.727	0.770	0.757	0.758	1

CC=Correlation Coefficient

Discussion

The trends associated with the results noted here suggested that there are still opportunities to understand working relationships. These results show that not all respondents perceived their work relationships with a strong foundation for successful collaboration. The fact that 64% of respondents' answered "sometimes" to trust-related questions showed that this aspect of work relationships can be enhanced. People in trusting relationships seek input from one another (Tallia et al. 2006). Geue (2017) emphasized that virtuous behavior characterized by cooperation, trust, and fairness relate to the formation of a positive work environments, which often result in exceptional performance. This research study recognize a degree of dissatisfaction with interpersonal relationships and a lack of trust and effective communication (Geue 2017). This could be a good reason to encourage research administrators and principal investigators to explain why working relationships are so important and how negative workplace interactions have the potential to be a source of grant mismanagement. Furthermore, understanding the importance of healthy working relationships can ultimately increase successful interactions by fostering trust, social and task-related connections and effective communication. According to Rosales (2016), positive interactions marked by trust, mutual regard, and active engagement improve employee awareness of others, foster positive emotions (e.g., empathy and compassion), and build positive and thriving workplaces (Rosales 2016). This research study demonstrates that there is room for improvement in working relationships. Research administrators are continuously dealing with a challenging and stressful working environment. However, positive interactions founded in trust, collaborative and

respectful relationships may create a virtuous circle where communication and collaboration nurture engagement and contribute to effective grant management.

Limitations

This research study has some limitations. The selection of research administrators was limited to the NCURA Collaborate community. Invitation to other societies such as the Society of Research Administrators (SRA) International or the Research Administrators Certification Council were not submitted. Another limitation of this study was the absence of a ratio between the number of professional involvement in administering sponsored research programs and the number of grants managed.

This research was not corrected for confounders, such as years of experience in this job or number of awards. Since the survey was anonymous, the wide range of research organizations represented in this study was not determinable.

Chapter 5

Conclusions and Recommendations

Conclusions

The purpose of this research study was to identify factors that influence a healthy relationship between research administrators and investigators in award management. Overall, research administrators essentially agreed on the perception of an environment of respectful work relationships. However, respondents recognized a degree of failure to communicate adequately and properly. In addition, the results of this study indicated that there was a lack of interactions beyond task-related relationships. As previously reported, work relationships required a mixture of social and task-related relationships, and these practices should be encouraged (Tallia et al. 2006). Furthermore, research administrators perceived the absence of trust in their working relationship. Successful work relationships are built on open communication and trust as the top strategies to combat challenges (SHRM 2017). Failure to integrate these components would represent a mark of apathy and hinders the employee-employer relationship (Geue

2017, 9) and affect job performance (Seppala and Cameron 2015; Tran, Nguyem Dang, and Ton 2018).

Recommendations

Further research is required to provide a better understanding of research administrators' perspectives and consequences about work relationships. Further explanation of how trust, effective communication, and varied interactions impact productivity in the grants management is important. Causal research studies in this topic might be useful for the improvement of work relationships to benefit award management process.

Appendices

Appendix 1

IRB Approval Letter

Page 1 of 2



Homewood Institutional Review Board

3400 N. Charles Street
Wyman Park Building, Suite N468
Baltimore MD 21218-2685
410-516-6580
<http://homewoodirb.jhu.edu/>

Michael McCloskey, PhD
IRB Chair

Date: March 8, 2020

PI Name: John Carfora

Study #: HIRB00010678

Study Name: Factors that influence a healthy relationship between research administrators and investigators in the award management process.

Date of Review: 3/7/2020

Date of Acknowledgement: 3/7/2020

Expiration Date: 3/7/2023

The above referenced study has been *acknowledged*.

Review Type:	Exempt
Funding Agency:	Not funded
Grant or Contract Number:	
International Sites:	No
Maximum number of participants:	500
Vulnerable populations:	None
Consent process:	
Assent Process:	

No changes may be made to the protocol or the consent form without the approval of the

Board.

To keep the Homewood IRB files current, we are assigning an expiration date to projects that qualify as not human subjects research or exempt. You will receive an email notification prior to the expiration date shown above, providing guidance to extend this project.

Please keep this message in your files for future reference. Thank you for contacting the Homewood IRB about this research and for providing the requested information to make this determination. Your cooperation is greatly appreciated.

Please keep in mind that it is your responsibility to inform the HIRB of any adverse consequences to participants that occur in the course of the study, as well as any complaints from participants regarding the research. In conducting this research, you are required to follow the requirements listed in the *HIRB Policies and Procedures Manual*.

Approved Documents:

Recruiting Materials:

Project_email for Survey(1).docx

Study Team Members:

Celia Corona Villalobos

APPROVAL IS GRANTED UNDER THE TERMS OF FWA00005834 FEDERAL-WIDE ASSURANCE OF COMPLIANCE WITH DHHS REGULATIONS FOR PROTECTION OF HUMAN RESEARCH SUBJECTS
--

Appendix 2

IRB Amendment Approval Letter



Homewood Institutional Review Board

3400 N. Charles Street
Wyman Park Building, Suite N468
Baltimore MD 21218-2685
410-516-6580
<http://homewoodirb.jhu.edu/>

Michael McCloskey, PhD
IRB Chair

Date: March 27, 2020

PI Name: John Carfora

Study #: AM00010978 HIRB00010678

Study Name: Factors that influence a healthy relationship between research administrators and investigators in the award management process.

Date amendment approved: March 27, 2020

Study Expiration Date: March 7, 2023

The Homewood IRB has reviewed an amendment to this research project and will be reviewed as Exempt going forward.

Addition of/change to recruitment or recruitment materials

Please keep a copy of this letter for future reference. Thank you for contacting the Homewood IRB about this research and for providing the requested information to make this determination. Your cooperation is greatly appreciated.

Approved Documents:

Recruiting Materials:

Project_email for Survey(1).docx

Study Team Members:

Celia Corona Villalobos

If you have any questions, please do not hesitate to contact the HIRB at (410) 516-6580 or HIRB@jhu.edu.

Appendix 3

Sample of the Email Invitation

FACTORS THAT INFLUENCE A HEALTHY RELATIONSHIP BETWEEN RESEARCH ADMINISTRATORS AND INVESTIGATORS IN THE AWARD MANAGEMENT PROCESS SURVEY INFRASTRUCTURE

Dear Colleague:

This research is being conducted by Celia Pamela Corona Villalobos, a graduate student at the Johns Hopkins University as part of a thesis requirement for the Masters of Science degree in Research Administration.

You are invited to participate in a brief survey. The survey should take no more than 10 minutes of your time. The survey will ask about characteristics of work relationships. I will use this information to determine factors that could potentially improve working relationships in the award management process.

Please note that this survey is for research purposes only. You do not need to provide confidential information. By completing this survey or questionnaire, you are consenting to be in this research study. Your participation is voluntary and you can stop at any time.

By selecting the survey link button below you are confirming that you:

- Are 18 years or older
 - Have read the information above, and
 - Agree to voluntarily participate in this study.
- If any of these statements are not true, please do not complete the survey.

To start the survey, please click on the link below:

https://www.surveymonkey.com/r/RA_work_relationships

Thank you in advance for your time and for taking a moment to share your opinions and insights.

If you have any question please do not hesitate to contact me at pamelacorona@jhmi.edu

Thank you for your time and consideration!

|

Celia Pamela Corona Villalobos, MD
Phone: 410-502-3852
pamelacorona@jhmi.edu

This message and any attachment(s) are intended only for the use of the person or entity to which it is addressed and may contain confidential and/or proprietary information. Any review, retransmission, dissemination, or other use of, or taking of any action in reliance upon, this message and any attachment(s) by persons or entities other than the intended recipient is prohibited. If you are not the intended recipient of this message, or if this message has been addressed to you in error, please immediately alert the sender by reply email and delete this message, including any attachments. Sender accepts no liability for any damages caused by any virus transmitted by this email.

Appendix 4

Survey to Research Administration Groups

Work Relationship Assessment in the Award Management Process

What is your Institution's practice on this continuum?

1. Seek input from others

- ☐ Always
- ☐ Sometimes
- ☐ Never

2. Allow others to complete their work without unnecessary oversight.

- ☐ Always
- ☐ Sometimes
- ☐ Never

3. Feel comfortable discussing success and failures

- ☐ Always
- ☐ Sometimes
- ☐ Never

4. Include people who have different backgrounds or perspectives

- ☐ Always
- ☐ Sometimes
- ☐ Never

5. Encourage those who think differently about important issues to share their opinions.

- ☐ Always
- ☐ Sometimes
- ☐ Never

6. Open to new ideas

- ☐ Always
- ☒ Sometimes
- ☐ Never

7. Talk free about what is and is not working in the award management process

- ☐ Always
- ☐ Sometimes
- ☐ Never

8. Adjust routines in response to current situations; not just running on autopilot.

- ☐ Always
- ☐ Sometimes
- ☐ Never

9. Being attentive to current tasks as well as larger goals

- ☐ Always
- ☐ Sometimes
- ☐ Never

10. Being aware of individual roles and how they affect other functions and people in the field

- ☐ Always
- ☐ Sometimes
- ☐ Never

11. Being considerate, honest, and tactful

- ☐ Always
- ☐ Sometimes
- ☐ Never

12. Valuing others' opinion

- ☐ Always
- ☐ Sometimes
- ☐ Never

13. Understanding the importance of both social and task-related relationships

- ☐ Always
- ☐ Sometimes
- ☐ Never

14. Encouraging people to pursue activities outside of work

☐ Always

☐ Sometimes

☐ Never

15. Understanding when certain methods of communication are more appropriate and timely than others

☐ Always

☐ Sometimes

☐ Never

16. Using "rich communication" (e.g. face-to-face meetings) for more sensitive matters

☐ Always

☐ Sometimes

☐ Never

17. Using "lean communication" (e.g. memos) for routine matters.

☐ Always

☐ Sometimes

☐ Never

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About the Author

Celia Pamela Corona Villalobos received her Medical Degree from the Universidad Panamericana in Mexico City, Mexico. After completing residency training in Diagnostic Radiology in Mexico and her Fellowship in Cross Sectional Imaging, she became Chief Resident of the Radiology Program. She then completed a five-year research fellowship in Radiology and Radiological Science in Magnetic Resonance Research Imaging at the Johns Hopkins Hospital. Dr. Corona-Villalobos has extensive experience in cross-sectional imaging and cardiovascular magnetic resonance imaging (MRI) using novel functional imaging techniques. She has worked extensively on validating new methods for detailed functional and morphologic assessment of tumor metabolism, pulmonary hypertension, and hypertrophic cardiomyopathy. These methods quantify tumor response, edema, inflammation, and fibrosis. She has submitted competitive grant applications and has been the recipient of numerous awards. She is currently collaborating in a multicenter and multidisciplinary research project developing new kidney fibrosis biomarkers, including an MRI project for kidney precision medicine.

Dr. Corona-Villalobos was very interested to learn about the core of research not only from the scientist angle but as a research administrator. She began to get more involved in research administration, and her interest for this profession has grown significantly. She is a well-organized professional with robust thinking and extensive

experience in academic and research activities. Dr. Corona-Villalobos has advanced knowledge and experience in proposal preparation, accounting and budgeting, an exhaustive understanding of federal and institutional regulatory compliance and human subject research, as well as award management processes.